

Patent Claims

1. Damping arrangement for guide vanes, in particular for guide vanes of a gas turbine or an aircraft engine, whereby the radially external ends (29) of the guide vanes (28) of a guide vane grid or a guide vane ring (27) are mounted to a housing, whereby the radially internal ends (30) of the guide vanes (28) form an inner shroud (31), whereby at least one seal bearing (32) is mounted to the inner shroud (31) of the guide vanes (28), and whereby at least one spring element is installed between the inner shroud (31) of the guide vanes (28) and the, or each, seal bearing (32),
characterized in that
the, or each, spring element (34) is configured as a leaf spring.
2. Damping arrangement in accordance with Claim 1,
characterized in that
the, or each, spring element (34) configured as a leaf spring is installed in a hollow space (35) having low radial height and being located between the inner shroud (31) of the guide vanes (28) and the, or each, seal bearing (32).
3. Damping arrangement in accordance with Claim 1 or 2,
characterized in that
the, or each, spring element (34) configured as a leaf spring is clamped between the inner shroud (31) of the guide vanes (28) and the, or each, seal bearing (32).
4. Damping arrangement in accordance with Claim 3,
characterized in that
the, or each, spring element (34) configured as a leaf spring is clamped between the inner shroud (31) of the guide vanes (28) and the, or each, seal

bearing (32) in such a manner that said spring element's central abutment section (36) abuts against the, or each, seal bearing (32), and two of the spring element's lateral abutment sections (37, 38) abut against the inner shroud (31) of the guide vanes (28).

5. Damping arrangement in accordance with Claim 3, characterized in that the, or each, spring element (34) configured as a leaf spring is clamped between the inner shroud (31) of the guide vanes (28) and the, or each, seal bearing (32) in such a manner that said spring element's central abutment section (36) abuts against the inner shroud (31) of the guide vanes (28), and the spring's two lateral abutment sections (37, 38) abut against the, or each, seal bearing (32).
6. Damping arrangement in accordance with one or more of the Claims 1 through 5, characterized in that, between the inner shroud (31) of the guide vanes (28) and the, or each, seal bearing (32), at least one securing element (41) is installed in addition to the, or each, spring element (34).
7. Damping arrangement in accordance with Claim 6, characterized in that the, or each, securing element (41) extends in circumferential direction laterally next to the, or each, spring element (34) that is configured as a leaf spring.
8. Damping arrangement in accordance with Claim 7, characterized in that

the, or each, securing element (41) is configured as a securing wire.

9. Damping arrangement in accordance with one or more of the Claims 5 through 8,
characterized in that
the, or each, spring element (34) configured as a leaf spring has at least one angled section (44) which acts as a securing tab for a securing element (41).
10. Damping arrangement in accordance with one or more of the Claims 1 through 9, characterized in that
the, or each, spring element (34) configured as a leaf spring extends minimally in radial direction.
11. Damping arrangement in accordance with one or more of the Claims 1 through 10,
characterized in that
the, or each, spring element (34) configured as a leaf spring comprises several leaf spring sections (39) separated from each other by slits (40), whereby each inner shroud (31) of each guide vane (28) is associated, respectively, with such a leaf spring section (39).